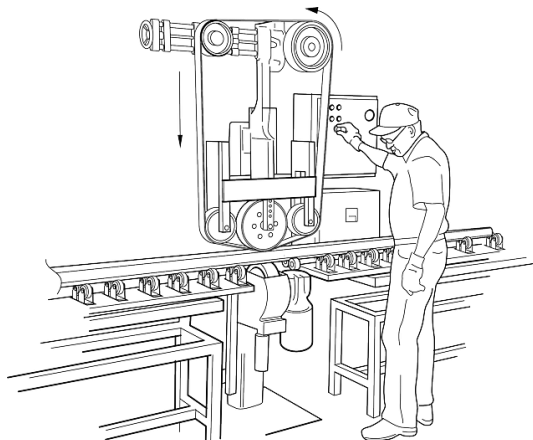




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Introducing Product Environmental Footprint to export-oriented manufacturers in Azerbaijan



Background

In 2013, the European Commission (EC) published a recommendation on the use of a common methodology to measure and communicate the environmental performance of products and organizations¹. This recommendation was part of the European Union (EU) Single Market for Green Products (SMGP) initiative and came as a response to the endless list of “green” or sustainability-related labels that were leading to confusion for consumers and additional costs for those companies wishing to market their products as environmentally-friendly. Within the EU SMGP, over 280 volunteering companies and organizations learned about the requirements needed to calculate environmental footprint through either the Product Environmental Footprint (PEF) or the Organization Environmental Footprint (OEF).²

The Product Environmental Footprint (PEF) methodology

PEF is a multi-criteria measurement of the environmental performance of a good or service throughout its life cycle. PEF information is produced with the purpose to reduce the environmental impacts of goods and services, considering their supply chain activities (from the extraction of raw materials, throughout production and use, all the way to the disposal of waste). In brief, PEF is the EU-recommended tool, based on the Life Cycle Assessment (LCA) of a product or service, to quantify its environmental impacts. It does so by modelling the environmental performance of the flows of resources, materials, or energy, and by looking into the supply chain of the product to better identify waste streams associated with production.

The PEF method is closely tied to the LCA, but it is not identical to it. LCA is a standardized methodology quantifying environmental pressures, benefits, trade-offs, and improvement areas in the life cycle of a product. LCA looks at the product phases (such as production, transport, use, and end of life). Separately, PEF is a way of conducting the LCA, but with an added strength to deliver more consistent, reliable, and reproducible results. This is because the PEF methodology is less flexible than LCA, has more stringent requirements on data quality, and introduces weighting and normalization of databases which reduce freedom of interpretation.³

Challenges and opportunities for applying LCA in Azerbaijan

Multinational enterprises have pioneered the application of LCA in various products to improve operational efficiency and gain a competitive edge (by manufacturing more sustainable products and communicating efforts via environmental labelling schemes). Naturally, the availability of financial resources and reliable data inventories have also facilitated these efforts. For example, the LCA performed by the Midwest Research Institute for the

Coca-Cola Company beverage containers in 1969 is considered one of the first LCA studies conducted in Azerbaijan. Today, many large industrial companies have their own LCA specialists and can integrate the methodology into their research and development activities. The multinational corporations currently operating in the country are also top candidates and potential partners for the introduction and application of PEF studies, as this would further strengthen their commitment to the United Nations Sustainable Development Goals, particularly SDG 12 (responsible consumption and production), which requires member states to encourage companies (especially large and transnational ones) to integrate sustainability information into their reporting cycle. However, Azerbaijan also needs to adopt a national sustainability reporting policy to further support such efforts, as well as include Small and Medium-sized Enterprises (SMEs).⁴

Renewable energy companies are also an interesting example for piloting PEF, as they are expanding their operations in Azerbaijan and creating additional opportunities for the application of LCA. For instance, ACWA Power of Saudi Arabia recently signed an implementation agreement with the Ministry of Energy of Azerbaijan for developing and operating a 240 MW wind park project. Its diffusion technology would not only achieve sectoral productivity, but also the transfer of essential knowledge, innovation, and key practices and procedures⁵. In addition, as these companies' value chains encompass direct operations in Azerbaijan, they create the possibility for future LCA and carbon/water footprint studies as part of their efforts to assess their global environmental impacts.

What does PEF mean for my company?

Each manufacturer or supplier is responsible for ensuring sustainability through product stewardship. Hence, LCA represents the practical realization of this concept, as it aims to comprehensively analyze the potential environmental implications of a decision-making process. LCA forms the scientific and methodological foundation of PEF (Product Environmental Footprint) and OEF (Organization Environmental Footprint) methods. PEF enables enterprises to improve their production actively and strategically (e.g., by rethinking design, closing resource loops, or giving by-products a new purpose). This helps them make production more efficient and update production patterns to prevent the generation of waste. Besides offering databases and calculation methods, PEF also gives general rules to product groups so companies can benchmark their progress within their sector or category.

¹ Source: https://www.eu4environment.org/news/the-potential-applicability-of-the-pef-methodology-for-azerbaijani-enterprises/#_ftn1

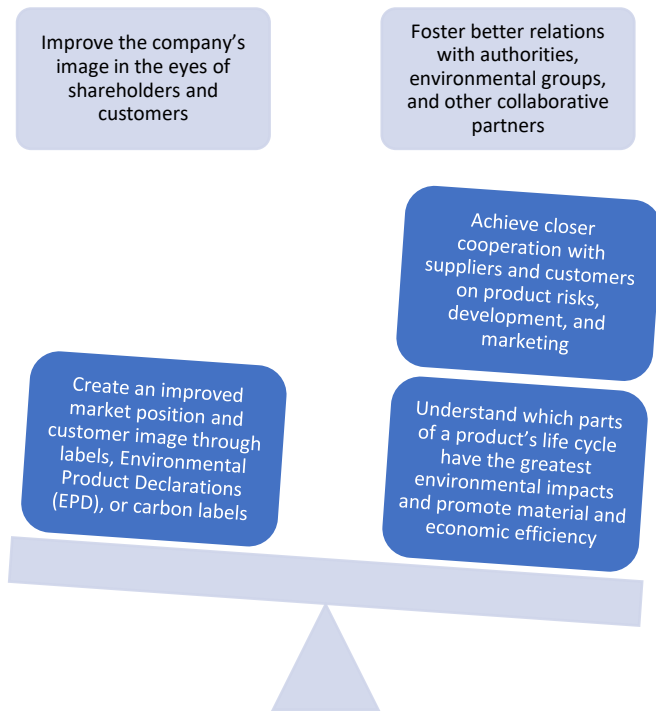
² Source: [idem as above](#)

³ Source: https://www.meti.go.jp/committee/kenkyukai/sangi/lca/pdf/001_04_00e.pdf

⁴ Source: <https://sdgs.un.org/goals>

⁵ Source: [idem as above](#)

In turn, they can better understand and showcase their environmental performance against competitors (benchmarking is also a powerful incentive to build a reputation and create sustainable and environmentally-friendly goods and services that are appreciated in the everyday life of consumers). Hence, being a good environmental performer, especially in a market as dynamic and competitive as the EU Single Market, represents an added value that can ensure good business prospects and sound strategies for any company. Additionally, drivers or incentives for applying PEF can also:



Azerbaijani sectors potentially interested to adopt PEF standards, based on their import and export profile

Azerbaijan's export profile is heavily dominated by the energy sector, followed by agriculture, and minerals (energy and minerals accounted for more than 90 % of exports in 2019).⁶ Vegetables were the second largest exports in 2018-2019, with metals and jewels being the third.⁷ Other relevant export sectors include chemicals, machinery, food (particularly grapes), beverages, petroleum and natural gas, iron and steel, nonferrous metals, and other products. Imports include iron and steel, machinery, food (particularly meat and dairy), and beverages.⁸

The potential benefits of PEF for export-oriented companies

The use of PEF and OEF methods is a voluntary choice for any company interested to export goods to the EU Single Market. A progressive application of PEF and OEF methods could reduce the need for third-country companies to comply with multiple requirements existing across different domestic markets in the EU. A single study based on the use of PEF and OEF could also be used to comply with various requirements across private and public schemes, as well as the requirements from different EU Member States (which would lead to reduced administrative costs for companies)⁹. A further benefit would be that these two methods would provide assurance for future schemes and labels, helping companies to showcase their sustainability efforts. "Green" or environmentally-friendly goods that are produced outside the EU would also benefit from increased consumer confidence in the company's environmental claims.¹⁰

The introduction of PEF under EU4Environment

Since 2019, the EU funded EU4Environment Action has been supporting Azerbaijan, alongside other Eastern Partnership (EaP) countries, in pursuing the path of green development. EU4Environment aims to preserve and better use natural capital, increase people's environmental well-being, and stimulate greener economic growth. Its initiatives help deliver policy and legislative changes, make planning and investment greener, and stimulate the uptake of innovative technologies by adopting new business models and creating green jobs. This is because EU4Environment integrates greener decision-making, circular economy, smart environmental regulations, ecosystem protection, and knowledge sharing into a single strategic framework.

Currently, in the EaP region, the PEF methodology is promoted as an activity led by the United Nations Industrial Development Organization (UNIDO), through EU4Environment. Here, the planned work includes mapping existing practices and barriers to introduce PEF to the available labelling schemes, raising awareness and understanding of the opportunities and benefits of the SMGP Initiative through PEF, and leading the way to pilot and promote PEF in selected industries.

This will make the local stakeholders more aware of the potential benefits and impact of applying PEF, create local capacity in the EaP region, help the national industries to be better prepared for potential policies involving PEF, and provide learning opportunities for local experts (by using pilot studies and making concrete suggestions for a manufacturing shift towards more sustainable products). In addition, UNIDO will promote local awareness and capacity-building activities that contribute to the broader support of green efforts and policies. The learnings from this initiative are also used to formulate recommendations for enabling PEF-compliant studies in other regions outside Europe.

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⁶Source: <https://documents1.worldbank.org/curated/en/09910000922236784/pdf/P17532606988e2056084e603c9c48dc618.pdf>

⁷Source: <https://trendeconomy.com/data/h2/Azerbaijan/TOTAL>

⁸Source: [idem](#) as above

⁹Source: <https://circabc.europa.eu/ui/group/6e9b7f79-da96-4a53-956f-e8f62c9d7fed/library/2820c074-41c7-4666-b379-a8ca08f812ab/details?download=true>

¹⁰Source: [idem](#) as above